

ABSTRACT OF THE DISCLOSURE

There is provided an EL light-emitting device with less uneven brightness.

- 5 When a drain current of a plurality of current controlling TFTs is I_d , a mobility is μ , a gate capacitance per unit area is C_0 , a maximum gate voltage is $V_{gs(max)}$, a channel width is W , a channel length is L , an average value of a threshold voltage is V_{th} , a deviation from the average value of the threshold voltage is ΔV_{th} , and a difference in emission brightness of a plurality of EL elements is within a range of
- 10 $\pm n\%$, a semiconductor display device is characterized in that

$$A = \frac{2I_d}{\mu * C_0}$$

$$\frac{A}{(V_{gs(max)} - V_{th})^2} \leq \frac{W}{L} \leq \left(\sqrt{1 + \frac{n}{100}} - 1 \right)^2 * \frac{A}{\Delta V_{th}^2}$$

$$|\Delta V_{th}| \leq \left(\sqrt{1 + \frac{n}{100}} - 1 \right) * \sqrt{A * L / W}$$